Name _____ Date _____



# Scaling the Solar System

## Procedure

1. **Measure** Work with three other students. Obtain the scale distance values from your teacher and write them on the lines below. Using the marker and the measuring tape, mark off along the string the positions of the Sun and planets.

_____

_____

_____

2. **Use Models** Label one of the rectangles as the Sun. Tape the sign to a stake. Gently push the stake into the ground, if outdoors. If you are indoors, make a small clay ball and push the stake into the clay.

3. **Collaborate** Work with the members of your team to label the rest of the rectangles with the planet names and tape each to a stake.

4. **Use Numbers** Have one team member hold the end of the string that represents the Sun while another student stretches the string so that it is taut. The other students on your team should place the planet stakes in their correct positions along the stretched string.

## Conclusion

**Write the answers to the questions.**

1. **Analyze Data** Which group of planets—the inner or the outer planets—is closer together?

_____

_____



**Use with page D63**

**2. Use Numbers** Study the distances between the first four planets from the Sun. Is there a pattern? If so, what is the pattern? Then describe distances among the outer planets.

_____

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## Investigate More!

**Design an Experiment** Find the diameters of the planets on pages D65–D66. Use these diameters to make a scale-size model of the Sun and each of the nine planets. Use a scale of 1 cm to 1,000 km.